

# Union Calendar No. 346

116<sup>TH</sup> CONGRESS  
2<sup>D</sup> SESSION

# H. R. 4091

[Report No. 116–432]

To amend the America COMPETES Act to reauthorize the ARPA–E program, and for other purposes.

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## IN THE HOUSE OF REPRESENTATIVES

JULY 30, 2019

Ms. JOHNSON of Texas (for herself and Mr. LAMB) introduced the following bill; which was referred to the Committee on Science, Space, and Technology

JUNE 18, 2020

Additional sponsors: Mr. MAST, Mr. BEYER, Mr. TONKO, Mr. FOSTER, Mr. SWALWELL of California, Mrs. WATSON COLEMAN, Ms. JACKSON LEE, Ms. HILL of California, Mr. LIPINSKI, Mr. DEUTCH, Mr. CONNOLLY, Mr. COHEN, Mr. SCHIFF, Mr. CASTEN of Illinois, Mr. MCNERNEY, Mr. ROUDA, Mrs. FLETCHER, Ms. BONAMICI, Mrs. LURIA, Mr. CASE, Ms. STEVENS, Mr. RIGGLEMAN, Ms. KENDRA S. HORN of Oklahoma, Mr. PERLMUTTER, Mr. PAPPAS, Mr. FORTENBERRY, Ms. SLOTKIN, Mr. KATKO, Ms. BROWNLEY of California, Mr. LYNCH, Mr. CROW, Mr. ALLRED, Mr. LUCAS, Mr. GRAVES of Louisiana, Mr. CRENSHAW, Mr. BACON, Ms. SHERRILL, Mr. NEGUSE, Mr. SCHNEIDER, Mr. LUJÁN, Mr. HUFFMAN, Mr. BAIRD, Mr. MARSHALL, Mr. FITZPATRICK, Mr. PETERS, Mr. HIMES, Mr. WELCH, Mr. MOULTON, Mr. HURD of Texas, Ms. STEFANIK, Ms. HOULAHAN, Mr. GONZALEZ of Ohio, Mrs. AXNE, Mr. KEATING, Ms. WILD, Ms. ESHOO, Ms. PORTER, Ms. SPANBERGER, Mr. MICHAEL F. DOYLE of Pennsylvania, Mr. SCOTT of Virginia, Mr. DESAULNIER, Miss GONZÁLEZ-COLÓN of Puerto Rico, Ms. CASTOR of Florida, Mr. ROONEY of Florida, Mr. WALTZ, Ms. HERRERA BEUTLER, Mr. BALDERSON, Mr. WOODALL, Mr. FLEISCHMANN, Mrs. BROOKS of Indiana, and Mr. GALLAGHER

JUNE 18, 2020

Reported with an amendment, committed to the Committee of the Whole  
House on the State of the Union, and ordered to be printed

[Strike out all after the enacting clause and insert the part printed in *italic*]

[For text of introduced bill, see copy of bill as introduced on July 30, 2019]

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## **A BILL**

To amend the America COMPETES Act to reauthorize the  
ARPA–E program, and for other purposes.

1        *Be it enacted by the Senate and House of Representa-*  
2 *tives of the United States of America in Congress assembled,*

3 **SECTION 1. SHORT TITLE.**

4        *This Act may be cited as the “ARPA–E Reauthoriza-*  
5 *tion Act of 2019”.*

6 **SEC. 2. ARPA–E AMENDMENTS.**

7        (a) *ESTABLISHMENT.*—*Section 5012(b) of the America*  
8 *COMPETES Act (42 U.S.C. 16538(b)) is amended by strik-*  
9 *ing “development of energy technologies” and inserting “de-*  
10 *velopment of transformative science and technology solu-*  
11 *tions to address the energy and environmental missions of*  
12 *the Department”.*

13        (b) *GOALS.*—*Section 5012(c) of the America COM-*  
14 *PETES Act (42 U.S.C. 16538(c)) is amended—*

15            (1) *by striking paragraph (1)(A) and inserting*  
16 *the following:*

17                    “(A) *to enhance the economic and energy se-*  
18 *curity of the United States through the develop-*  
19 *ment of energy technologies that—*

20                            “(i) *reduce imports of energy from for-*  
21 *eign sources;*

22                            “(ii) *reduce energy-related emissions,*  
23 *including greenhouse gases;*

24                            “(iii) *improve the energy efficiency of*  
25 *all economic sectors;*

1                   “(iv) provide transformative solutions  
2                   to improve the management, clean-up, and  
3                   disposal of radioactive waste and spent nu-  
4                   clear fuel; and

5                   “(v) improve the resilience, reliability,  
6                   and security of infrastructure to produce,  
7                   deliver, and store energy; and”;

8                   (2) in paragraph (2), in the matter preceding  
9                   subparagraph (A), by striking “energy technology  
10                  projects” and inserting “advanced technology  
11                  projects”.

12                  (c) *RESPONSIBILITIES*.—Section 5012(e)(3)(A) of the  
13 *America COMPETES Act (42 U.S.C. 16538(e)(3)(A))* is  
14 amended by striking “energy”.

15                  (d) *REPORTS AND ROADMAPS*.—Section 5012(h) of the  
16 *America COMPETES Act (42 U.S.C. 16538(h))* is amended  
17 to read as follows:

18                  “(h) *REPORTS AND ROADMAPS*.—

19                         “(1) *ANNUAL REPORT*.—As part of the annual  
20 budget request submitted for each fiscal year, the Di-  
21 rector shall provide to the relevant authorizing and  
22 appropriations committees of Congress a report  
23 that—

24                                 “(A) describes projects supported by ARPA—  
25                                 E during the previous fiscal year;

1           “(B) describes projects supported by ARPA–  
2           E during the previous fiscal year that examine  
3           topics and technologies closely related to other  
4           activities funded by the Department, and in-  
5           cludes an analysis of whether in supporting such  
6           projects, the Director is in compliance with sub-  
7           section (i)(1)(A); and

8           “(C) describes current, proposed, and  
9           planned projects to be carried out pursuant to  
10          subsection (e)(3)(D).

11          “(2) STRATEGIC VISION ROADMAP.—Not later  
12          than October 1, 2021, and every four years thereafter,  
13          the Director shall provide to the relevant authorizing  
14          and appropriations committees of Congress a road-  
15          map describing the strategic vision that ARPA–E  
16          will use to guide the choices of ARPA–E for future  
17          technology investments over the following 4 fiscal  
18          years.”.

19          (e) COORDINATION AND NONDUPLICATION.—Section  
20          5012(i)(1) of the America COMPETES Act (42 U.S.C.  
21          16538(i)(1)) is amended to read as follows:

22          “(1) IN GENERAL.—To the maximum extent  
23          practicable, the Director shall ensure that—

24                 “(A) the activities of ARPA–E are coordi-  
25                 nated with, and do not duplicate the efforts of,

1            *programs and laboratories within the Depart-*  
2            *ment and other relevant research agencies; and*

3            *“(B) ARPA–E does not provide funding for*  
4            *a project unless the prospective grantee dem-*  
5            *onstrates sufficient attempts to secure private fi-*  
6            *nancing or indicates that the project is not inde-*  
7            *pendently commercially viable.”.*

8            *(f) EVALUATION.—Section 5012(l) of the America*  
9            *COMPETES Act (42 U.S.C. 16538(l)) is amended—*

10            *(1) by striking paragraph (1) and inserting the*  
11            *following:*

12            *“(1) IN GENERAL.—Not later than 3 years after*  
13            *the date of enactment of the ARPA–E Reauthoriza-*  
14            *tion Act of 2019, the Secretary is authorized to enter*  
15            *into a contract with the National Academy of*  
16            *Sciences under which the National Academy shall*  
17            *conduct an evaluation of how well ARPA–E is*  
18            *achieving the goals and mission of ARPA–E.”; and*

19            *(2) in paragraph (2)—*

20            *(A) in the matter preceding subparagraph*  
21            *(A), by striking “shall” and inserting “may”;*  
22            *and*

23            *(B) in subparagraph (A), by striking “the*  
24            *recommendation of the National Academy of*  
25            *Sciences” and inserting “a recommendation”.*

1       (g) *AUTHORIZATION OF APPROPRIATIONS.*—Para-  
2 *graph (2) of section 5012(o) of the America COMPETES*  
3 *Act (42 U.S.C. 16538(o)) is amended to read as follows:*

4               “(2) *AUTHORIZATION OF APPROPRIATIONS.*—  
5 *Subject to paragraph (4), there are authorized to be*  
6 *appropriated to the Director for deposit in the Fund,*  
7 *without fiscal year limitation—*

8                       “(A) \$428,000,000 for fiscal year 2020;

9                       “(B) \$497,000,000 for fiscal year 2021;

10                      “(C) \$567,000,000 for fiscal year 2022;

11                      “(D) \$651,000,000 for fiscal year 2023; and

12                      “(E) \$750,000,000 for fiscal year 2024.”.

13       (h) *TECHNICAL AMENDMENTS.*—Section 5012 of the  
14 *America COMPETES Act (42 U.S.C. 16538) is amended—*

15               (1) *in subsection (g)(3)(A)(iii), by striking “sub-*  
16 *part” each place it appears and inserting “subpara-*  
17 *graph”;* and

18               (2) *in subsection (o)(4)(B), by striking*  
19 *“(c)(2)(D)” and inserting “(c)(2)(C)”.*

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